

The National Association of Corporation Schools

Bulletin

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ADVANCE OF INDUSTRIAL EDUCATION

Certain educational movements, which may be properly classified as "industrial," are commanding attention at the present time.

The Continuation Schools of Wisconsin, and more particularly the development of this movement in Milwaukee, is explained by Mr. R. L. Cooley, Superintendent in Charge, in this issue of the BULLETIN.

At Fargo, N. D., the Better Farming Association, which was organized in 1911, has accomplished wonderful results. Thomas P. Cooper, who is in charge of this work, will contribute an article to the BULLETIN, which will probably appear in the October issue. The principal object of the Better Farming Association is to bring about the more general practice of permanent and profitable forms of agriculture and to develop the phases of farm life which will better rural agricultural conditions generally. So great has been the success of this movement that it promises to spread throughout all the industrial sections of the United States.

At St. Paul, the Bureau of Efficiency of the Northern Pacific Railway Company, which has been organized but a little over a year, is able to show a reduction in deaths due to accidents for the first half of 1914, as compared with the first half of 1913, of 73 per cent. During the first six months of 1913 the deaths from this cause were forty-eight, whereas during the first six months of 1914 there were but thirteen. We have secured a most valuable report of the organization and operation of this bureau, which will appear in a later issue of the BULLETIN.

At Topeka, Kan., is located the headquarters of the educational work of the Atchison, Topeka & Santa Fe Railroad. This corporation is now conducting educational work on behalf of its

employees at thirty-eight different points and has about eight hundred young men in its apprenticeship courses. Mr. F. W. Thomas, in charge of this work, is now preparing to extend educational benefits to other classes of employees of the system.

At St. Louis, Mo., the "Fellowship" movement in the Commonwealth Steel Company is showing wonderful results. This work will be described in a later issue of the BULLETIN.

At Cincinnati, Dean Herman Schneider, of the Engineering College of the University of Cincinnati, has progressed further toward a solution of vocational guidance than any other investigator of which the editor of the BULLETIN has knowledge. Dean Schneider is not yet willing to have the work which he has done made public, but we are hopeful of getting an article which will outline the progress made and tell how it has been accomplished.

A new movement in Cincinnati, under the direction of Mr. J. Howard Renshaw, formerly in charge of the Continuation Schools of that city, is commanding attention. This movement is perhaps the most unique of any recently investigated by the Editor of the BULLETIN, and Mr. Renshaw will tell about it in either the September or October issue.

Superintendent R. J. Condon has recently written a paper on the Co-operative Schools of Cincinnati and this paper is printed in this issue of the BULLETIN.

At Richmond, Va., a survey is being made of industrial conditions by Mr. W. C. Locker, Principal of the John Marshall Night High School. Richmond is doing unusual things along the lines of industrial education and Mr. Locker has promised a copy of his report, which will be reproduced, at least in part, in the BULLETIN.

The movements mentioned above have progressed beyond the promotional stage, and the information gained can, at least to some extent, be used in promoting similar movements in other sections of the country. There are, of course, other vicinities in which industrial education is being rapidly developed. What all of this means to the efficiency of the industrial workers of the United States can best be comprehended by reference to two recent statements, one contained in the report of the Committee on Industrial Education, to the effect that out of twenty-five million workers in the United States less than one per cent. have been sufficiently trained for the work in which they are engaged, and the other a statement contained in a recent address of Mr. Frank A. Vanderlip, President of the National City Bank of

New York, to the effect that the efficiency of the American farmer as a whole does not exceed forty per cent. of what is both practical and possible.

A PROBLEM FOR LIBRARIANS

The movement for better industrial education in which our Association is playing a leading part makes evident the fact that another movement of almost equal significance is about to be inaugurated. In each of the cities where public schools unite with industry and educational courses are inaugurated, on behalf of the children and young men and women who are employed in the local factories, offices, etc., there will arise a demand that the local libraries put in certain books which will be used as text books and for collateral reading. This new problem is one of large proportions and one that the Librarian's Association should consider. With properly selected lists of books in the public libraries it is possible for the individual to continue self education almost without limit. But the work of selecting and installing such books must first be done by the librarians.

DR. KERSCHENSTEINER PRAISES AMERICAN EDUCATIONAL SYSTEM

Dr. George M. Kerschensteiner, known as father of the vocational schools of Munich, Germany, declared in an interview that nowadays brains were being overeducated to a point rendering thousands of young men useless for practical work. The German youth, he said, lacks practical education. German young men seek small but safe harbors and prefer small subordinate positions in the employ of the state, when they could do much better for themselves had they been practically educated and not educated above and beyond such work. "From a standpoint of practical education and fitting boys for business or to make their own livelihood, the American schools are better than German systems with the exception of the Munich vocational schools," said Doctor Kerschensteiner. "The American schools are equipped so as to direct the inclination of scholars into practical channels. A love for practical work is fostered in the boys. German schools, generally speaking, drive away from practical activity instead of steering in that direction. How can

anyone who for six years or longer in the higher schools, has been fed on nothing but books and works, find courage to enter a workshop and work with his hands? What sums of intelligence are thus lost to independent economic life. We Germans have a right to praise ourselves for having given to the world public schools but we no longer should clothe ourselves in the toga of the *praeceptor mundi*. No people in the world make such sacrifices for their schools as do the Americans."

PUBLIC SCHOOLS WILLING TO CO-OPERATE

The new alliance between industry and education is assuming forms which a few years ago would have been considered impossible. For example the Board of Education in New York City is willing to teach wherever provision is made for its instructors. For some time past teachers from the public schools have been instructing the younger employees of the department stores, more especially the girls serving in the capacity of messenger and cash girls and from fourteen to sixteen years of age. But schools are now being established in the big office buildings and in the hotels and wherever there seems need of further education. The Board is showing a willingness to send its instructors and to furnish text books and to give the necessary instruction.

Whatever criticism may be made of the public schools it certainly cannot be urged in New York City, or elsewhere so far as the writer has knowledge, that the Boards of Education are not willing to co-operate to the limit.

The National Association for the Study and Prevention of Tuberculosis has prepared a pamphlet for distribution on the important subject of "Medical Examination of Employees." The pamphlet will contain the results of experience and experiments carried on in Chicago, with discussions by prominent labor leaders, physicians and others. It will be in the nature of a primer to those who wish to start a campaign for systematic medical examination of employees. Copies of this pamphlet may be secured on receipt of postage amounting to four cents, from the office of The National Association for the Study and Prevention of Tuberculosis, 105 East 22d Street, New York City.

RETIRING PRESIDENT'S ADDRESS *

Mr. Williams Summarizes the Industrial Educational Movement

Mr. Toastmaster and President-Elect and Ladies and Fellow Members: I could not but think that a week ago Mr. Edison sat with President McCall and myself here as fellow members, and to-night I sit here with our president, the immortal Steinmetz. (Prolonged applause.)

Another great pleasure this evening is the announcement that the Southern Pacific Railway Company has become a member of our Association. That means, in my judgment, that just as Conductor Schwab was brought from San Francisco to New York to receive a medal from his company, and by that act put one million and a half railroad employees in this country on the firing line of "Safety to human life," so by joining this Association, something like 60,000 to 65,000 men, the employees of this great organization, will be better off materially and more useful in the future than would have been possible without this membership in our Association. And so that influence will reach out, in my judgment, until it affects every part of industry in this country.

Inception of Corporation School Movement

The Pennsylvania Railroad before the War—Mr. Henderschott found this out—held a conference at Altoona which was somewhat akin to this movement of to-day. The National Cash Register Company started its commercial school fully eighteen years ago; and I think I may say that the starting of this movement as a national activity really had its beginning in those earlier efforts. It is perhaps only fair to say of the starting of our own organization that it was the work of Mr. Patterson which led to the suggestion that Mr. Henderschott should take up the subject of Industrial Education in this country. And it was his report on that subject which led to the organization with which Mr. Henderschott is connected. Then from that the suggestion came—I presume not alone from that, but that was the starting point which set the machinery in motion—that led to the conference of others who were leaders in this movement;

* Delivered at the Banquet of the Second Annual Convention of The National Association of Corporation Schools held in Philadelphia, June, 1914.

and then from that came our organization. I feel we should never do injustice to the past in the interest or in the enthusiasm of the moment; and the day will come when many minds will ask, What was the beginning of this movement?—this movement which will undoubtedly affect the lives of the greater part of our population.

The Birth of a New Industrialism

I think it was ex-President Roosevelt who tried to start a movement in this country which was called The New Nationalism. I see not entirely that, but the birth of a New Industrialism as a part of this new movement. At the same time that education should be only an incident of our work, and not the end. The highest degree of producing efficiency depends on the highest degree of specialization in the individual; and high efficiency in production is necessary in order to place the modern necessities at the disposal of those who are without large financial resources. And I say, that while efficiency in specialized application to the particular piece of work is perhaps one of the principal objectives of the features connected with these organizations, it is to be remembered that it is but one of the objectives, and our teachers should be broadly educated so that they may put broad ideas into the lives of those they teach. It seems to me the members of our Association and the teachers who will develop from the training they get in this corporation school work should reach out in two directions. They should endeavor to bring into the lives of those they teach a broad education, comparable, at least in a large measure, to the education a man or a woman gets through one of our established universities. Then they should see to it that this movement is properly tied up with all other educational movements, and this is a point I think we should keep constantly before us.

The Value of the Corporation School

We are not part of the vocational training in the public schools except in the sense that it gives the young personal contact in manual virtues in becoming manually useful; and I do not know that we favor vocational training or manual training that seems to determine the vocation in later life, which we see in the public schools of our country. I think we will agree that that would limit the boy and the girl in the public schools. And

while we are deeply interested and should become active in any kind of vocational training undertaken by the State or nation, yet I do not see that this is our particular field so much as that we endeavor to bring into the lives of the workers, at a time when they may obtain the benefits of teaching, such training as can be provided under the auspices and within the curricula of the corporation schools. I think we should sustain as a principle, that so great is the benefit to the employer through educational development of the employees, that the cost of these schools should be paid for by the employers, at least the teaching courses; and the attendance should be compulsory and within the time of the employer. The cost would be found to be not a cost at all, but a profit; and I think our mind should be united upon that as one of the first principles of our Association.

The Friendly Attitude of Labor

I am not very much concerned about the views of labor in the matter. I have heard that labor would absolutely oppose the work, the modern progress of what I have suggested, somewhat as being termed the new industrialism. I have been told that labor would oppose it by some of the leaders of labor unions. When I was asked to speak before the Firemen's Union in New York, I said: "I am going to try out the men for the various things for which I think modern industry should stand, to bring into their lives a better chance for advancement." I told them of a few of the things I thought I could believe in; and when I finished, instead of finding an audience, a packed house of firemen, opposed to those things, their applause was absolutely unanimous, and as I left the room they rose to their feet. So you can never convince me that labor is opposed to anything which genuinely seeks to benefit it.

Then I was told that labor was opposed to safety work. And so at the International Congress of Safety and Sanitation we tried to get the greatest leaders of labor of this country to address us; and they came and spoke enthusiastically. And when the case was later presented to various organized labor branches, without a single exception it was unanimously endorsed; and when we appealed to the Legislature for a charter, organized labor went to Albany and supported the bill which permitted the City of New York to contribute to the work of the Museum. I am never afraid of labor, either organized or

singly, if your objective is to bring to it a square deal. If you explain what you have in your mind and then live up to that explanation.

It must be admitted that any movement on the part of the employer, which avowedly is for the improvement of the laborer, is at first received with suspicion. That is recognized as the preliminary experience at the outset when any welfare effort is in hand. But as soon as the fairness and the sincerity of the movement has been demonstrated to the employees, there is no more appreciative audience than those employees. Suspicion at first, and then warm recognition and hearty support.

In the case of a school with which I am most directly connected, but which is administered by Mr. Henderschott, Mr. Henderschott told me at the beginning that ninety-five per cent. of the members would be opposed to the school at the outset, and that ninety-five per cent., after its purposes were understood, would be in favor of its continuance. The percentages have been entirely proven as the purposes of the school have become manifest.

Solution of the Problem of Industrial Unrest

My own conception is that the larger problems of industrial unrest are to be eventually solved by the men who are making a life work of this corporation school movement; and I think that, as you go back into industry, a recognition of changed conditions will be apparent, and some conception of the development of the future should be in the mind of all of us.

I think one of the most unfortunate things is that destructive criticism which finds nothing but bad in the past; which fails to take into recognition the rightness of the act which corresponds with the condition of public opinion at the time. Thus we have to-day a great deal of destructive criticism of the past; and we fail to recognize that the best of the past, while criticised to-day, was then in harmony with the times. And, first of all, a school-master should be fair, and not enter into acute criticism which seeks to cut off the heads of those who have gone before. They should recognize that great changes have taken place; we must all admit that. We have long-distance ownership, control and management now, and workers do not get in touch with their employers; they do not get in contact with that world of experience. Then, again, the apprentice systems of the past, as Secretary Redfield pointed out, have been absolutely eliminated from

the industry of our country, and boys and girls are going into industries with the simple training of the elementary school, and naturally going into industries highly specialized in their work; later they marry and are dependent on their income for existence, and they are held fast, practically tied, and they become a fallow field for the agitators. Where you take something out of a man's life you must replace it with something.

Industrial Accidents and Their Compensations

Then we have the industrial accident, the burden of which has fallen on the injured employee or his dependent. We have organized the Casualty Company to protect us, as employers of labor, and when employees get injured we turn them over to the Casualty Company, who in turn gamble that they shall be compelled to do nothing for the injured, permitting the entire cost to fall on the employee. Is it strange that a hostile feeling is aroused against such a condition?

What is the cure? The cure in this instance is that full compensation should be paid, and the insurance should be paid on a basis like that in fire insurance, where an indemnity is paid if a loss occurs.

That, I need not tell you, is becoming one of the accepted standards under which modern industry is now being conducted. We find it in State legislation, through which we are now beginning to get compensation laws. But I draw your attention to the conditions where accidents do not occur. Under the conditions where they did occur, the man met the losses on the ground of negligence or by reason of the carelessness of a fellow employee, and nothing then was paid for the accident. Now you have an earlier and secondary condition, you have that better sense, to protect the individual as he should be protected, placing the cost upon the industry.

Service Annuities

Then I was pleased to find in this convention that you have, as I understand your resolutions, adopted the term "Service Annuity," instead of "Pension." There you have a growing principle, which is that an employee who has given faithful and long service to his employers, has given a kind of service for which he has not been fully compensated in his weekly or his monthly pay envelope. Twelve men sat in a room in conference at Washington for two days, the men who composed the public

policy committee of the National Electric Light Association; and they went on record as saying that long and faithful service (this is not charity) brought a value for which employees were not paid; and that they should be compensated, and that compensation should not be called a pension, but a "Service Annuity." That is a thought which the members of this Association may carry back into their industry as part of their school work.

Labor Should Share in Profits

Then another result: The changes that have taken place in modern industry, as contrasted with twenty years ago, give the worker far less chance to become economically independent. The chances for rising have lessened as specialization has increased; and while throughout his life his brain is active, his efficiency is marred and his chances, as the years pass, are lessening rather than enhancing as they did under former conditions. And it was in recognition of that fact that this same committee said that the man who goes into any industry which is largely depending on labor was entitled to a share of the profits of that industry. And where that principle has been applied it has not been found to fail. And it has never cost anything, but, in addition to paying for itself, has produced a dividend for the employer. And I think that is one of the things this Association may stand for in its larger relationship to labor.

And then finally, as I need not say, the fourth element which should be introduced into modern industrial life is the thing our Association stands for primarily—it is education in industry, to broaden industry. It gives a man a chance with his fellow who has had the opportunity of spending more years out of industry and in an educational institution, the man who has had a university education. His chances for becoming economically independent in life are as four to one against the other man. And that is the fourth element which, through this Association, we should sustain as one of the features in the industrial unrest and industrial injustice which must be eliminated from industries.

Mr. Toastmaster, as retiring president, may I publicly express our collective sense of appreciation—my own individually—to the great institution which has entertained us here? I would like to propose, as the King of England permits the drinking of his toast in cold water, as I heard at a dinner recently—I propose that we drink a rising toast to Mr. Curtis, our host.

SCHOOLS AND CONTINUATION SCHOOLS

R. L. COOLEY,

Superintendent Continuation Schools, Milwaukee, Wis.

The first task immediately before the school authorities of this country is the modification of the elementary schools as to courses of study and methods of teaching. The next important thing is the establishing of schools for the people of the community who are employed.

For the latter, in Wisconsin, we have legislative authorization; a measure of legal compulsion for apprentices and workers under sixteen years of age and a half mill on each dollar of the assessed valuation of the city to support the work.

The work is carried on under an independent board and is unhampered by salary schedules, certification requirements, traditions as to vacations, hours, equipment or methods of teaching.

Relation of Continuation School to Elementary School

What we can do in our continuation schools is determined, in a measure, by what the elementary schools last attended by these workers did or did not do for them. I do not believe that the conditions of the young workers upon leaving the elementary school in Milwaukee are materially different from those to be found in any large city, and certainly not materially worse. I likewise believe Milwaukee has one of the best elementary school systems in the country, and that the elementary schools all over the country are better to-day than elementary schools have been in our history. And yet I believe that all too much of the ore dumped into our educational smelters proves refractory and that an intelligent study of our smelting processes with a view to their improvement is our elementary school's greatest need.

Sixty per cent. of the boys and girls who quit the elementary school and go to work at fourteen years of age have not completed more than the sixth grade. Of these practically all are poor readers, poor spellers, inaccurate in their mathematical processes, and apparently without the general knowledge which they could reasonably be expected to possess in view of their age and years in school.

A man remarked to me the other day that he was not able to get on in school, he could only learn in the school of experience. The remark struck me with a new significance. He thought of

himself as an exception, and, in view of his success in business, spoke of the fact with a touch of pride. On reflection, however, it seems probable that the same is true of one-half of our pupils, and, in only a lesser degree, of the other half.

Elementary Schools Should Be Schools of Experience

Experience is a great teacher. It pays to study its method. It is true in life that an experience which would have saved money may come after the loss has occurred, from the standpoint of a financial transaction may be a failure, but as an instance of effective teaching the incident is certainly successful and suggests a method it would be well for us to observe. When experience teaches, the lesson is always motivated. The pupil nearly always realizes the usefulness of the thing to be learned, and hence to him it is important at the time. Experience always presents a concrete case to her pupil. Experience always teaches what it uses, and uses what it teaches. In the school of experience the pupil always feels that he is learning. If I were to criticize our elementary schools in general terms, I should say they are not sufficiently "schools of experience," and were I to offer the suggestion I think most vital to their improvement, I would say: our elementary schools must be made more and more schools of experience.

A little nine-year-old girl at the breakfast table the other day asked her father to drill her in the table of liquid measures. He did so—4 quarts, one gallon; 2 pints, one quart; 4 gills, one pint, she correctly said. Before her on the table stood a tumbler about one-quarter filled with water. "How much water have you in your glass?" the father inquired. "One quart," the child promptly replied.

Asked to draw a half-inch line on the blackboard, a perfectly normal fourteen-year-old boy drew a half foot.

These illustrations are not extremes. All too many of our elementary school pupils have not been able to learn by the methods used in the ordinary elementary school. Many have gotten on fairly well. I am sure, however, that in the school where reasonable effort is made to precede the lesson by or accompany it with experience suitable to the age of the child, all pupils will learn more readily and have what they know "on tap." Why did the little girl not know a gill from a quart, or the boy know a half inch from a half foot? The answer is found in the

fact that they simply had never measured anything. Their knowledge to date was utterly useless and unconnected with anything in their existence. Not to multiply instances, it cannot be gainsaid, too many of our schools continually teach just that way and get just the result obtained in the instances mentioned.

To succeed, the school must be life, and must have brought into it the necessary experience, so that the child will as truly be learning in the school of experience while in school as will be the case when he leaves.

I am not arguing against children being set a task and held to its mastery, but I do insist that the task must, in the main, be co-ordinated with the children's experiences. This means that the life of the child in play and work must be studied, and, in a measure, controlled and the lessons of the class-room based upon, and the method of the recitation modified by that life. Disagreeable tasks and uninteresting ones must be performed from a sense of duty and out of respect for authority, but in such cases the task so performed must be because the pupil and not the teacher feels the compulsion of duty, and because the pupil respects rather than fears the authority exercised over him.

I believe the elementary school must be modified in its material equipment so that the playground, the work-shop and the laboratory will furnish the activities that will largely use the education the child acquires from day to day. I believe the courses of study must be so modified as to draw their content from the playground, the home, the shop and the laboratory. I believe the teachers must obtain their method of teaching from the observation of how grown people and children learn the things they do learn outside of school. The teacher in the elementary school will then "put across" what he attempted to teach.

When that is done it will be possible for the work of the Continuation School to be other than it is to-day.

Educational Facilities for all People

The work authorized by our recent legislation in Wisconsin is that of affording educational facilities for all people who desire to study along commercial, home-making and industrial lines—whether in part-time or evening schools.

Two compulsory groups formed the major part of our attendance during the first year, viz., the 14- to 16-year-old "permit" worker and the legal apprentice. Evening classes were also

offered and largely attended. I will discuss these in the reverse order in which they are named, and but briefly.

In the evening classes, English for foreigners made up the largest group. The desire to learn the English language was the major motive in the minds of those attending. It would be wrong, however, to permit the impression to prevail that these people were not eager for our American history or appreciative of our American ideals. The language teaching was made the vehicle for lessons in history, civics, hygiene and industrial geography. The next largest group were the women in sewing and cooking classes, the journeymen in mathematics and mechanical drawing, estimating and contracting, gas, electric and steam stationary engineering for people working in such positions, printing, architectural drawing, bookkeeping, stenography and commercial law for young business men. Continuation classes were also formed for young people who wished to continue their elementary school studies. No one under 16 years of age was allowed.

Work With Apprentices

The work with our apprentices is entirely day work, the attendance compulsory and upon the time of the employer, the boy receiving pay from the employer while in school. The only apprentices we recognize in Wisconsin are the legal apprentices. There are supposed to be no other. The Industrial Commission, which has charge of the enforcement of the apprenticeship law, has, wisely we think, moved slowly, thus permitting the school to feel and win its way. We have now

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| 190..... | Machinist apprentices. |
| 52..... | Pattern maker apprentices. |
| 14..... | Printer apprentices. |
| 22..... | Bricklayer apprentices. |
| 30..... | Baker apprentices. |

In establishing apprenticeship schools each trade is studied with a view to find out just what sort of equipment and instruction is necessary to supplement the opportunity of the apprentice in that particular industry. If it needs shop or laboratory equipment in the estimation of the practical men who have been handling the apprentices in that industry, such equipment is provided. To illustrate:

We will teach the bakers' apprentices the growth of yeast and how a certain temperature is best for its development; what

happens when we go beyond this temperature and also what the results of too low a temperature are.

In practical experience many causes may contribute towards unsatisfactory results and young men are seldom able to observe the changes any one cause may produce.

In the school we will be able to make and treat dough alike and then vary therein in a single item and enable the boys to observe and become familiar with the results of that particular item.

We will, let us say, make a dough for bread. Part of this dough we will permit to ferment for an hour, then pan, proof and bake; result, immature green bread. Another part we permit to ferment for an hour and a half, producing some changes in the loaf; then, two, two and a half, three, four or five hours, when we may perhaps have the best flavored bread. Then five and a half and six hours. We now can show how yeast has eaten the life out of the flour; how instead of merely softening the gluten therein to make it more palatable and digestible it begins to decompose and rot it. In six and a half, seven or eight hours we can show how the yeast has degenerated and given place to acid fermentation, souring and spoiling the loaf. We can prepare a dough at, say, 50 degrees Fahrenheit and note how the yeast cells weakly struggle to obtain food, how they are not strong enough to cope with other forms of bacteria life present in the dough. In another dough we produce conditions exactly like those but raise the temperature to 60 degrees when the yeast will take a better hold. Then 70 degrees in one; the next—the very best for use—80 degrees; then 90, when we begin to be on the way to the other extreme, giving acid ferments the upper hand and, finally, at 105 and 110 degrees, making it “too hot” for the yeast altogether and almost killing it off.

Or, treating the matter from another angle, we can show how one flour must be treated differently than another to bring about best results. We can demonstrate one where we are sure fermentation and other things are correct and still the bread is not of the best quality, that the gluten in the flour is stronger and may require a little more fermentation, or weaker and cannot be subjected to the same conditions. This will educate the boys to examine and judge flour and accord it the treatment best adapted for its individuality to bring about the best results.

The same idea of instruction can be followed in the use of salt, sugar, lard, malt extracts, etc. In short, all the articles

used in the bakery, as well as the different modes of working, will be treated in a similar manner. We will take a dough and by manipulating it differently, working it differently, moulding it differently and proofing it differently produce different results and at the same time always keep the effect and the result directly before the eyes of the pupil.

Now, all these problems occur in the bakeries where the apprentice works from time to time. In the way in which they occur, however, they tend to confuse rather than enlighten the apprentice; they fill his mind with doubts and misgivings rather than certain knowledge as to just what occurs. He only sees the effects and is often entirely in the dark as to the cause. In the commercial life neither the time, the knowledge nor training necessary for lucid explanations are available to the boys. We are going to show them the cause and effect; teach them how to be masters of the situation and control the work rather than be slaves of circumstances and trying to grope their way to a clear understanding.

We also have part-time day schools for druggists and saleswomen, and will establish others as fast as the need is seen or the demand arises.

Our druggists come two half days a week and are taught in our laboratory by a competent druggist.

A class of young women from the department stores comes one-half day each day for a period of three months and are taught by an experienced saleswoman who has had special training for the work in Chicago and in Boston under Mrs. Prince, of the Women's Industrial Union. In addition to conducting this class, some of our teachers go out to the stores until 9.30 A. M. to meet larger groups of clerks for the discussion of their store problems.

The Fourteen-Year-Old Group

Now we come to the largest and probably the most important group of all—the 14- to 16-year-old boy and girl, who at 14 usually leaves the school, as I said before, at about the sixth grade and goes out into industry with too little education to continue self-educating, with too little of either age, experience or education to be of such value to their employer in any save the jobs that have no future in them. I need not describe these jobs. You are familiar with them. They have been surveyed, listed, counted, classified and possibly magnified.

It must be remembered that there are "dead end" children as well as "dead end" jobs. To the boy who is not a "dead end" boy such a job is merely a place to rest his lever, a fulcrum, which will enable him to move his world. Such a boy may be able to get on without the continuation school, but he is worthy of it, and will repay the community manyfold for the opportunity if it is given him. For the other fellow who has been chloroformed, or rather submerged, by the elementary school and social and economic conditions of his home and is about to go down for the traditional third time, the continuation school must be a life preserver and pulmotor. The community owes it to itself to save this child, to revive his ambition, stimulate his imagination and instruct him how to live respectably upon the wages likely to be earned as an unskilled worker in the social body. The experience of one is no criterion. One may escape to the ranks of the skilled worker or make a fortunate matrimonial venture, but the fate of the thousand is always the same. The girls will marry soon. In three or four years most of them will be rocking the cradle, doing the purchasing for a family, supported by the wages of an unskilled workman. If that is so, clearly they must be taught to cook and sew. They must be taught the economy of quality and must be led to grow in appreciation of color and design in personal dress and home equipment and arrangement. Fortunately nothing we can do for these young people meets so ready a response. This work is related rather to their age than their previous attainment in school and they take to it and do it practically as efficiently as though they were of the grade in school suited to their age.

It has been argued that the work indicated above is not the kind the employers rightfully demand in view of the interruption of their week's work by the demand for attendance at school and it is true that some of our employers do not exactly get our point of view. "You don't use judgment," said one manufacturer to me. "You take these people out of our factory just as you do out of other factories where nothing is done for them. We have done everything for these people's comfort and convenience. Why? Conditions in our factory are better than the conditions in the homes of these people." "Yes," I replied, "but the conditions in the homes of these people must be made better." What elements make up the conditions in the homes? As I see it they are two: The wages you pay and the intelligence with which these wages are expended. The conditions of these

homes must be bettered. Industry exists only for this purpose. Higher wages or more intelligent spending seem to us to be the only remedies. Which remedy seems to you to be the most promising and which do you want emphasized?"

Special Service

In addition to the above, we strive to save the investment the community has already made in the education of the child through academic reviews and reading. We have one teacher who devotes her whole time to connecting these girls with the public library. Hundreds of selected books are being sent out among these girls where investigation shows no books ever went before. This, I conceive to be—in moral value—one of the best pieces of work we are doing.

Our "permit" boys are given one and one-half hours of shop work, one and one-half hours of mechanical drawing and one hour of related academic work each week. This work is given only to boys who, speaking by the hundred, are certainly to earn their living in unskilled mechanical work. We have wood shops, electrical shops and metal shops, the work in which has been such as would be done in any manual training shop of the same kind. Boys are shifted through all of these shops. Practically all of our boys have no manual training, for manual training is not commonly given in the parochial schools, except by arrangement with our public school system, and unfortunately in our public schools manual training is related, perhaps necessarily, to the grade of the boy in school rather than to his age. A sixth grade boy, 14 years of age, will not have had manual training. Most of these boys, as life in the city is constituted in their economic stratum, have never held in their hands a hammer, a saw, a chisel or a plane.

We have about concluded our arrangements to group the boys more definitely according to their expressed wish relative to their future occupation. It will be possible, as we now have our school planned, to give the boys definite prevocational work in the following:

- | | |
|----------------------|---------------------|
| 1. Carpentry. | 6. Plumbing. |
| 2. Cabinet Making. | 7. Steam Fitting. |
| 3. Pattern Making. | 8. Electrical Work. |
| 4. Tinsmithing. | 9. Masonry. |
| 5. Sheet Metal Work. | 10. Machinist. |

- | | |
|---------------------------|------------------------------|
| 11. Concrete Work. | 16. Stenography. |
| 12. Power Plant Operator. | 17. Printing. |
| 13. Drafting. | 18. Baking. |
| 14. Bookkeeping. | 19. Painting and Decorating. |
| 15. Store Clerking. | |

The home-making ability of the boy must not be lost sight of. None of these boys can hope, as fathers of families, to get beyond the necessity of pinching economy. They will not be able to hire a carpenter to put up a shelf for their wives or a plumber to fix the faucets or clear out the drain any more than their wives will be able upon their earnings to hire a cook. Show me the man who is a considerate home-maker for his family, whose home shows his handicraft, and I will show you a good citizen. This much that is fundamental to their needs we must give them, and, fortunately, in the giving, the work can be made the best kind of vocational guidance. I have but little faith in the kind of vocational guidance that meets the boys one at a time, looks them over searchingly, squints the eye and pronounces the verdict. I was told I would never be any good as schoolmaster by that kind of a psychological analyst. Maybe he was right, but I never would believe it. The ambitions that are stirred up in the boy, the reach of his imagination and the opportunities that come his way are the elements that will decide. The boy who does not know opportunity when it comes his way will take the \$5-per-week job with no opportunity as against the \$4.50 job that offers a chance to learn and rise.

Masters are willing to apprentice more boys than they can get, and many a boy who is a helper could obtain an apprenticeship contract did he but value it and demand it. As I said before, we are trying to change the attitude of the boy toward apprenticeship, not in the expectation that all can become skilled workers, but in the hope that all who can, will do so.

For the office boy who is clearly not going into mechanical employment we offer typewriting, stenography and bookkeeping.

When we discover special talents in boys we call their attention to the occupation in which such special talent would be an asset, and in which, due to these particular talents, they would most likely be most successful and contented.

Is the Work "Vocational?"

All through the East we are asked, "Is the work you do 'vocational'?" Or rather more often we are told "The work you

do is not vocational." In reply I can say that most of the work we do outside of the 14- to 16-year-old group is clearly vocational judged by any standard. Fortunately, our Wisconsin law has not limited our efforts to "vocational" work nor attempted to define what constitutes "vocational" work. We are permitted to analyze the needs of these boys and girls and go in our teaching where the facts lead us. There is an identity of interest between these thousands of young people and the industries of the community. The best interests of the industries of the community do not require their exploitation, but the opposite. Employers have been fully consulted and I have yet to find one who asks that these 14- to 16-year-old boys and girls be taught specialized processes. I am universally told by employers to make these young employees more intelligent and more responsible; to make them more reasonable and reliable and teach them to look to their future. Is it necessary?

I give below a couple of cards drawn from our files:

A girl 15 years of age:

| | |
|-------------------------|-----------------------|
| September 17, 1913..... | Western Leather Co. |
| October 1, 1913..... | Badger Candy Co. |
| October 3, 1913..... | O. C. Hanson Mfg. Co. |
| October 8, 1913..... | Unemployed |
| October 9, 1913..... | Robt. A. Johnston Co. |
| October 20, 1913..... | Campbell Laundry Co. |
| March 10, 1914..... | Unemployed |

A boy 15 years of age:

| | |
|-----------------------|---|
| April 21, 1913..... | Morawetz Co. |
| July 9, 1913..... | Unemployed |
| July 12, 1913..... | Cutler-Hammer Mfg. Co. |
| July 25, 1913..... | Unemployed |
| August 2, 1913..... | P. G. Braun Glove Co. |
| October 2, 1913..... | Unemployed |
| October 3, 1913..... | F. Eder Fur Co. |
| January 22, 1914..... | Unemployed |
| Jan 27, 1914..... | Lepak Bros. (Trunks and Traveling Bags) |

It is from the ranks of those who leave school early that these unskilled workers of our community are most largely recruited. The condition of the unskilled worker is the big problem before us to-day. If the unskilled workers of the country could have in their pay-checks the saving and increased earnings

that would accrue from sobriety, reliability, responsibility and increased intelligence, all of which is reasonably within their grasp, if the industry could be relieved of the incubus of inefficiency and interrupted work due to the "floating" and other labor troubles due to ignorance and suspicion, unskilled work could be made to yield a living wage, which, if not freely given, the workers could reasonably demand and obtain. There is an identity of interests between the employer and employee, and this identity, though seen but dimly, is emerging to view. To illustrate: Shoes go out of one door of the factory and men out of the other. It is seen that just as surely as men make shoes the making of shoes makes men. Shoes that are made at the price of men are made at the price of the home market. Any employer who pays his workers so little or works them so long that his employees cannot consume normally is not fair to the manufacturer of clothing or other articles of common use. He restricts the market as truly as though he were to sink a populated area to the bottom of the sea. The unskilled worker does not so much need greater skill as he does the development and conservation of the qualities mentioned above. The education of the workers that contributes to this end is industrial education. Let the critics debate whether or not it is vocational.

MORTALITY OF SCHOOLING

Out of 86,000 pupils entered in the elementary public schools of New York City in one year, but 48,000 survive to the eighth year; of the 41,000 that qualify for high school, only 23,000 actually enter, and but 4,097 stick it through to graduation. That, Mayor Mitchel said in his address at New York University, represents the proportion of "mortality" in the schooling of 661,000 students.

What becomes of the vast number that drop out? They must go into industries while they are not even apprentices, not trained at all for their special vocations. For this reason the Mayor of the greatest industrial city in America has visited the industrial schools of the Middle West, especially those of Cincinnati, Gary, and Chicago, to observe models for the system of vocational training.

Efficiency in business requires organized knowledge constructively applied.

REPORT OF THE TREASURER**The National Association of Corporation Schools, July 7, 1914***Receipts*

| | | |
|---------------------------|------------|------------------|
| Dues—Class "A" | \$4,690.00 | |
| " " "B" | 605.00 | |
| " " "C" | 770.00 | |
| Miscellaneous | 38.27 | |
| Sale of proceedings | 186.00 | |
| | | <hr/> \$6,289.27 |

Disbursements

| | | |
|--|------------|------------------|
| Salaries—Asst. Secretary-Treasurer | \$883.29 | |
| Office Assistant (7 mos.) | 116.69 | |
| Meetings | 599.15 | |
| Committee | 18.55 | |
| Publications | 1,833.98 | |
| Miscellaneous | 81.07 | |
| Office | 446.80 | |
| | | <hr/> \$3,979.53 |
| Cash on hand | \$2,309.74 | |

Assets

| | | |
|-----------------------------|------------|---------------|
| Unpaid dues—Class "C" | \$20.00 | |
| " " "B" | 5.00 | |
| " " "A" | 50.00 | |
| Due on proceedings | 15.34 | |
| | | <hr/> \$90.34 |
| Total assets | \$2,400.08 | |

Respectfully submitted,

E. J. MEHREN, *Treasurer.*

The BULLETIN is advised that copies of the paper on "Standardized First Aid," given by Dr. Charles A. Lauffer, Medical Director for the Westinghouse Electric and Manufacturing Company, at the second annual convention in Philadelphia, can be secured by any member of our Association by addressing their request to Dr. Lauffer, East Pittsburgh, Pa.

BUSINESS MEN TO TEACH COMMERCE

Chancellor Brown of New York University Tells of Future Education

Dr. Elmer Ellsworth Brown, Chancellor of New York University, believes the educational systems of the future will incorporate in their general scheme the teaching of young men and women, "in banks and stores and counting rooms and offices generally, by men of business who have the ancient and everlasting ability to teach and the ancient and everlasting interest in teaching the principles and fundamentals of business." Education and commerce are closely interwoven, he says, and from the practical side alone, the "hopes of many institutions of learning would fall to the ground if the fostering hand of commerce was withdrawn."

In giving some of his impressions of the "relation between education and commerce," he said that the debt owed by education to commercial enterprises had been enormously increased in recent years, and the gratitude of schools and colleges was not lacking in the traditional expectation of favors yet to come. Largely through the aid of commerce the method of education in the fine arts was made possible, in the work of women, and in statecraft, as well as in general industry.

"But within the past generation a new connection between commerce and education has appeared," he said. "We have come to have schools and colleges that deal directly with preparation for commercial life. There are many reasons why this new type of education has arisen. The people of this modern world have come to have great faith in the methods of school education. With all their faults, we believe that an educational institution can generally educate more efficiently and economically than an institution which is not educational. That very simple proposition carries large consequences.

"We find our modern schools and universities now extending methods and appliances into all sorts of fields where it had not been thought that they belonged. And we cannot doubt that this movement will go a great deal further than it has now gone.

"There are two of the newer methods of schools which have lent great force to this movement. One is the laboratory method. Almost unknown fifty years ago, it made its way into colleges

and high schools in the seventies and eighties of the last century, then spread from the physical sciences to other subjects of the school curriculum, until now we look for some equivalent of the scientific laboratory in most of the subjects of our curriculum.

"The second of these methods is that of combination of scholastic instruction with practical apprenticeship. This is mainly a development of the twentieth century. The University of Cincinnati has led the way with its six-year college course in engineering, one-half or more of the students' time being spent at the bench in ordinary commercial shops.

"These methods are spreading into the field of commercial education. Already our university schools of commerce are feeling their way toward some practical dovetailing of their regular courses of instruction with the apprenticeship work of their students in commercial establishments. In this way we are moving toward a new recognition and utilization of the teaching power of practical men of affairs.

"A new view of the responsibilities of higher education has appeared with the development of modern science. It is a view that any subject that has ideas in it can be studied scientifically. Since science has become free, no limit can be set on its extension. The universities, which aim to cultivate all the sciences, find themselves inevitable partners in every large human activity. In the nature of things they cannot be debarred from studying into every great human interest and saying their say about it.

"The assumption is that science can make clearer every problem of practical life, can prepare the way for more efficient procedure in every business of practical life. This assumption it would be hard to controvert. It can, indeed, hardly be doubted that the scientific study of business and the scientific preparation for a business career is to have in the near future a development far beyond even that to which the present popularity of our higher schools of commerce would seem to point.

"And the chief gain of such a development will be a moral gain. As human occupation becomes more scientific they acquire more of intellectual interest for their own sake, apart from or in addition to the financial profits which they may represent. They become more unselfish; they place larger emphasis upon truth and honesty.

"I do not believe that our commercial life has been conspicuously in need of such improvement, as compared with

other occupations, but the need is present everywhere and all the time. When Dr. James was sent some twenty years ago by the American Bankers' Association to study the systems of commercial education in Europe the most striking observation that he made was that commercial education not only prepares men of business, but helps in the improvement of the business itself.

"From an educational point of view it seems highly significant that the advance of trained intelligence in the field of commerce leads to a deeper grounding of those convictions on which a higher national life and a higher international life depend. It is the ultimate service of schools and universities to further the higher life. In so far as they shall prove their ability to render new and indispensable service they will hope to have their facilities for such service strengthened and enlarged."

The advantage of the newer teaching to business and to politics Dr. Brown summed up in this way:

"The methods of the universities will permeate our business houses so far as the training of their rising young men is concerned, and the teaching power of the Nestors of business will be made more widely serviceable. A common study of the relation of business to our political life in the city, the State, and the nation will lead to a better understanding by our public servants of the needs of the business community, and will also lead to a more constant and intelligent public service on the part of the citizens generally.

BOOK DEALERS IN CONVENTION DISCUSS THE NEED OF SCHOOLING THEIR HELPERS

The blank-faced book salesman who, by his incompetent innocence of the contents of the books he handles, blocks sales and disgusts would-be buyers among the reading public, came up for serious consideration by most of the speakers at the fourteenth annual convention of the American Booksellers' Association at the Hotel Astor, New York City. Representatives of 500 booksellers were in attendance.

The prevailing opinion seemed to be that a policy educating the book-selling clerk to a degree that would make possible a closer and more profitable connection between booksellers and readers should be adopted. It was even suggested that a nationwide correspondence school to teach the right principles of book-selling be established.

LIGHTING COMPANIES FAVOR EDUCATION OF EMPLOYEES

Committee Report Finds Great Need for Special Trade Training

At the thirty-seventh annual convention of the National Electric Light Association an interesting report was submitted by the public policy committee setting forth the policy of the electric lighting industry of the United States and Canada regarding the relationship between lighting companies, the public, the Government and their employees. The report states that considerably less than 10 per cent of our American population secures the benefit of high, trade or training school, to say nothing of university education, and that a vast majority enter our industries from the elementary schools, with any further training or education depending on the accident of their environment.

It further says that if this country is to hold its industrial supremacy we must recognize, as many European countries have, that there is no branch of industrial activities from which the trained mind can be eliminated. The report calls for the establishment of "continuation schools covering the various activities of the electrical industry and that the attendance be within the employers' and not the employees' time, and that the courses be not only broad and general, but also specific and individual as being the most productive of the highest degree of human efficiency."

NEW MEMBERS

CLASS "A"

Metropolitan Life Insurance Company, New York, Dr. Louis I. Dublen.

CLASS "B"

George I. Alden, Norton Company and Norton Grinding Company, Worcester, Mass.

Charles Robbins, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

CLASS "C"

Hugh Fox, United States Brewers' Association, New York.
Miner Chipman, Cambridge, Mass.

CINCINNATI'S CO-OPERATIVE SCHOOLS

Employers Like the Plan—Described by Superintendent Randall J. Condon

At the recent convention of the Department of Superintendence at Richmond, Va., City Superintendent Randall J. Condon, of Cincinnati, read a paper on "School and Shop, Work and Work," which is of pertinent interest.

In his address, Dr. Condon prefaced his paper with an historical account of the development the co-operative idea in Cincinnati showing that Dean Herman Schneider, of the University of that city, united labor and education in his co-operative courses in the engineering school in 1906 by which the students were to spend alternate weeks working in the shops or out on the road with the constructive crew. Dr. Condon continued as follows: "And he added this one new and important principle: That the work was to be not merely work, but work that was an application of the study, and the study not merely study, but an interpretation of the work. This principle once having been recognized and applied, its extension and adaptation to different phases of education have been comparatively easy and rapid.

"In Cincinnati, its first application was in the continuation school for apprentices in 1909—to which the apprentices from some twenty machine shops are sent for half a day a week receiving pay for the time so spent—to obtain instruction in mathematics, blue print reading, mechanical and free-hand drawing, English, economics, and civics—all bearing more or less directly upon their present and future work as machinists and their relation to the community, as good citizens. A similar plan of co-operation and instruction for the printers' apprentices followed a little later. These classes were all composed of pupils who had left school, generally at the end of the fourth or fifth grade, to go to work. The school reached out and invited them to come back for a half day a week, and asked the employer to permit them to attend without loss of pay. It would be more correct to say—that the offer came from the employers themselves. For under date of May 21, 1909, six of the largest machine shop manufacturers addressed a communication to Supt. Dyer, asking for such a school, and saying: ('The manufacturers consider this training of such importance, that they have agreed on their part that if you will establish these classes, they guar-

antee to furnish enough boys for at least one teacher, and to send their boys to school one-half day each week; and as an inducement to attend the school, they will agree to pay the apprentices regular wages during the period of instruction.')

"Its next application appeared the following year, 1910—in the organization of the high school co-operative courses for both boys and girls, in the two largest high schools, Hughes and Woodward. During the last half year of these courses, the boys are spending alternate weeks in various industrial establishments, while the girls are alternating between high school and dress-making and millinery establishments, and department stores. This year for the first time, we have extended the plan to the seniors in the commercial department, whereby they have the opportunity to apply in the office and counting rooms of the commercial establishments bookkeeping and stenography, which they are taught in the high school. The third application of the principle appeared in the organization of the compulsory continuation classes in 1911, whereby all pupils under 16 who had left school before the completion of the eighth grade were required to attend school for not less than four hours a week. This particular phase of the work will largely disappear next year the enactment of the Children's Code at the last session of the Legislature, will require all girls to remain in school until they are 16 and boys until they are 15; girls must also have completed the seventh grade and boys the sixth grade before they are permitted to work. So the only group for the elementary continuation schools will be boys between 15 and 16 years of age, who go to work before they have completed the eighth grade—a comparatively small number.

"We are hoping, however, to secure at the next session of the Legislature, the enactment of a law with reference to co-operative courses for pupils between 14 and 17 or 18 years of age, under which they may be employed for half time as a part of such courses. All of these developments are only applications of the principle of related work and study, each re-inforcing and giving content to the others; for it is not enough that the two should go on side by side in school and shop. They must be essential parts of one comprehensive plan under the control of the educational authorities. To better this realization, in September of this year, a teacher who had had large shop experience was appointed who gives nearly all of his time to the supervision of the work of the high school boys—doing only such teaching as

will enable him to establish helpful relation on the school side, applying from his shop experience certain lessons which he is best prepared to teach. A similar appointment was made for the girls co-operative work—a teacher, who by experience and inclination is able to direct their work along educational lines, who comes into close touch with each girl during her working assignments.

"It is not essential that the periods of alternate study and work should be the same for all industries; they may be varied to meet varied conditions. In the commercial work, we have started with by-weekly alternations; in the machine shops, the length of the period is one week; in the millinery and some other occupations, it is seasonal; in others, it may be a half day of study and a half day of work. But it is essential that the plan should be worked out upon a co-operative basis, not simply that the pupils should be permitted to work for a part of their time, but the arrangement should be undertaken with a conscious purpose to make the work educational. And it should be in accordance with a definite agreement between the school authorities and the employer, specifying the hours of work, the rate of pay, and permitting employment only when the conditions as to safety, sanitation and morals make it desirable for the pupils to undertake such work.

"When these conditions are met, I am in favor of permitting pupils to work between the ages of 14 and 16 years for not more than one-half of each by-weekly period, considering the work and study, whether in school or shop, as a distinct part of their education, to be carefully directed by school officials with that end in view. The agreement should also specifically require employers to provide such opportunities for work and instruction in the same as will afford the pupils, so employed, the largest possible opportunity for learning as a whole the occupations in which they are engaged; and will also afford opportunity for promotion to the more desirable positions within the establishment. It should be the business of the educational authorities to see that there is no attempt at exploitation, through the development of productive skill, at the expense of a more general knowledge of, and education in, the occupation as a whole. They should reserve the right to decide many of these questions and should withdraw from the agreement whenever it appears that the employer is not endeavoring in good faith to meet his part of the contract.

"Pupils should be permitted to work only in establishments which have been carefully inspected and approved. I believe, too, that we should extend our educational control to all minors under 18 years of age, providing co-operative courses connecting with all the leading industries; and that we should be ready to organize any such courses, when not less than 20 pupils desire the same. The principle should be clearly established that we are approaching the problem from the educational end; retaining pupils under school control until they are 18, but permitting them to work for a part of the time between 14 and 18, as an essential feature of their education. And this must be compulsory education: Compulsory on the child to attend; on the parent to send the child to school; on the community to provide the right kind of an education; and on the employer—not only to permit the child to attend school, but under certain conditions to provide such opportunities in his establishment as will make education possible through work connected with study."

AGRICULTURAL EFFICIENCY

Frank A. Vanderlip, President of the National City Bank, addressing the American Cotton Manufacturers' Association at their dinner in the Waldorf-Astoria Hotel, New York, declared that society should demand wise and efficient conduct of the great agencies of production as well as of public utilities.

"Directors of railroad property are told what they owe to the people in the way of wise and efficient management, and, in spite of the results attained, with which results in no other country are comparable," Mr. Vanderlip said, "they are held up to the public almost in the light of criminals, and compelled to perform their daily task under the regulating eye of agents of the Government. If that is a fair measure of the duty to society which the managers of public utilities may rightfully be expected to perform, and I do not wish to be considered as denying that the public has a right to exact wise and efficient management, then why should not society demand wise and efficient conduct of the great agencies of production?"

"If a railroad manager is culpable and is answerable to society for anything less than a hundred per cent. of efficiency, what of the great farmer and planter holding the great agency of production—land—and utilizing it with but 40 per cent. of efficiency? That is the indictment that stands against no small part of the agricultural community."

\$500,000,000 A YEAR COST OF ILLITERACY

P. P. Claxton, Education Commissioner, Says Ignorance Menaces Government

The rapid increase in adult illiteracy not only is costing an economic loss of \$500,000,000 a year in the United States, but has become a menace to representative government, according to P. P. Claxton, United States Commissioner of Education, who spoke at the Industrial League Conference on Adult Illiteracy held in New York on June 16th.

The conference formally set forth its belief that if industrial managers were fully cognizant of the degree of illiteracy existing among adults they would co-operate with the public school authorities in the establishment of classes to be held in factories, stores, construction camps and elsewhere in working hours in the daytime without loss of pay, for instruction in reading, writing and speaking. Resolutions were passed, calling on State Boards of Education, Chambers of Commerce, Boards of Trade, individual managers, and others to help in bringing about such instruction.

P. P. Claxton, United States Commissioner of Education, said that the census of 1910 showed there were more than 5,500,000 persons in the United States, ten years and more, unable to read or write. In the Southern States, he said, a large percentage of the native-born whites were unable to read and write. In certain counties in the South 40 per cent. of the voters were unable to read the ballot and sign their names. The number of illiterate negroes in this country, according to Commissioner Claxton, was 2,250,000, and most of these were adults.

The number of illiterates in New York, New Jersey and Connecticut was now 313,100 more than twenty years ago, Commissioner Claxton said, while the number in the southeastern group of the Southern States had been decreased by 600,884. The increase of illiteracy in the Eastern States, and particularly in New York, he attributed to the constantly growing influx of foreigners. He added:

"We have now before Congress a bill to require the Commissioner of Education, under the direction of the Secretary of the Interior, to investigate the methods that have been and

are now being used in this country and in foreign countries in teaching illiterate men and women to read and write.

"You have in New York State 406,020 adults unable to read and write. A large part of them are foreigners. Consider what this means from an economic standpoint. In the country at large the difference in the productive power of those who can read and write and those who are illiterate is something like \$100 a year. I believe this is a most conservative estimate. In underproduction this means to the whole country a loss each year of \$500,000,000, to New York, New Jersey, and Connecticut \$50,000,000 and to New York alone \$40,000,000.

"Some ask if we can educate these people. In Rowan County, Ky., men and women 40 and 50 years old have been taught to read and write after a series of ten lessons. Some as old as 80 learned to read and write. In New York City a certain manufacturing establishment has shown what can be done for illiterate employees, with the co-operation of the public schools."

In this country, where everything depended on the intelligence of the workers, it was considered strange by Commissioner Claxton that there should be something like seventy illiterates out of every 1,000 population, whereas in Germany, Scandinavia, and other European countries there were about three in every 1,000.

Arthur C. Dean, Chief of the Division of Vocational Education of the New York State Department of Education, said the illiterate workers should receive a fundamental education first and a vocational or industrial training later. He thought the State should recognize that the problem of illiteracy was its own and not the problem of the municipality, the village, or the school district. He suggested that the Bureau of Immigration could help in the war against illiteracy by furnishing the names, ages, and addresses of foreign families destined to different school districts.

Charles D. Hine, Secretary of the Connecticut Board of Education, was Chairman of the conference. Some of the other speakers were Samuel J. Slawson, Superintendent of Schools, Stamford, Conn.; Mrs. Marian Clark, Chief Investigator, Bureau Industries and Immigration, New York State Department of Labor; Anna C. Hedges, consultant, Industrial Education, and Lizzie E. Rector, Principal Public School No. 4, New York.

EDUCATIONAL PLAN FOR CITY EMPLOYEES

Mayor Approves of Plan Whereby Workers in Various Departments Can Help Solve Problems That Vex Executives

To put the departments of the city of New York in the same efficiency class as the best of the privately owned and conducted corporations now are is the plan to be worked out from giving the employees of the city a voice in the running of the different departments in which they are employed.

This is a radical departure in city government, but when the steps in advance made by private corporations are considered and comparison is made with the inefficient, antiquated systems that prevail in some of the departments it will be realized, its advocates say, that this is a move in the right direction.

The formation of an employees' conference committee is being contemplated. This committee will handle matters which affect the welfare or the interest of the municipal workers. Henry Bruere, City Chamberlain, the prime mover in the work, is backed by Mayor Mitchel, who feels that the workers themselves, if interested in the proper fashion in the city's work, can solve many of the intricate problems that now perplex the heads of departments and the city executive.

The proposed committee will be made up of representatives from each of the departments under the Mayor's jurisdiction, and will devote itself principally to a consideration of the relations between the city government and its employees.

Two Plans are Proposed

It has not been decided how representation on this committee will be given, this being one of the details which remain to be worked out. Two plans, however, have been proposed. The first is that the members of the committee be elected from the different departments, each department to have a certain representation. The second is that the heads of the departments may designate certain men and women to serve on the committee to represent their department in this work. The first plan, which calls for an election to the committee, is generally favored, and will be the one to be adopted, in all probability. The plan used in business concerns seeking better industrial relations that the Municipal Employees' Conference Committee would consider is outlined as follows:

An Outline of the Plan

Part I.—Relations between employer and employee.

- (a) Representation in management:
 - 1. Work committee.
 - 2. Joint boards of control.
 - 3. Stock ownership.
 - 4. Suggestion systems.
- (b) Settlement of disputes, arbitration and conciliation:
 - 1. Voluntary agreements, protocols.
 - 2. Under governmental acts.
 - 3. Compulsory arbitration.
- (c) Wages:
 - 1. Increasing wages through efficiency.
 - Minimum wage schemes.
 - Systems of promotion.
 - Bonus system.
 - 2. Methods of lessening hardship of seasonal occupations and unemployment.
 - 3. Progressive methods of remuneration, such as profit sharing, etc.
- (d) Employment bureaux.

Part II.—Work designed primarily to improve conditions in individual establishments.

- (a) Physical conditions:
 - 1. Sanitation and illumination.
 - 2. Hygiene.
 - 3. Safety and fire prevention, fire drills.
 - 4. Hospital and rest rooms.
 - 5. Visiting nurses.
 - 6. Lunch rooms.
 - 7. Recreation.
 - 8. Housing and dormitories.
 - 9. Co-operative stores.
 - 10. Community work.
- (b) Mental development:
 - 1. Lessening evils of monotonous occupations.
 - 2. Education.
 - Special schools.
 - Continuation plans.
 - Co-operative schools.

Vocational guidance, etc.

3. Libraries.

4. Entertainments, lectures, etc.

Part III.—Association of employees and those activities usually carried on by such associations with or without the participation of employer.

(a) Mutual benefit associations, etc.

(b) Co-operative savings and loan associations.

(c) Pensions.

(d) Compensation for accidents and illness.

Certain features of this committee work, as Mr. Bruere advocates it, have been tried out in the Department of Education and in the Department of Correction. The plan has worked particularly well in the latter department, according to Commissioner Katharine B. Davis. Many suggestions that have vastly benefitted the work have come from the employees of the department, the wardens, the keepers and in some instances from the inmates of the various institutions under the charge of Commissioner Davis.

"THE PRESENT—A TIME OF OPPORTUNITIES"

An extract from "Successward" a book written by Edward Bok, Editor of the *Ladies' Home Journal*.

"The young man engaged in business to-day in this country has advantages exceeding those of any generation before him. And I do not say this simply as an echo of what others before me have said, or to use a platitudinous phrase. There never was a time in the history of America when a young man has the opportunity to make something of himself as at the present day. He lives in a country where every success is possible; where a man can make of himself what he may choose; where energy and enterprise are appreciated, and a market is always ready for good wares. Young men have forged to the front wonderfully during the past ten years. Employers are more than ever willing to lay great responsibilities on their shoulders. Salaries are higher than ever; young men never before earned the incomes which are received by some to-day. Success is possible to every one capable of achieving it.

"But a young man must be alert to every opportunity. He

cannot forget himself for a moment in business. A man's best working years are not many, and when they are upon him he must make hay, and all the hay he can. No young man can afford to reach the age of thirty without feeling that he is settled in a business way. Before that time he flounders of necessity; but at thirty the floundering time should be over. He should have found that special trade or profession for which he thinks he is most capable. This age is generally accepted, I believe, for the reason that a man is most likely to do his best work between thirty and fifty; after fifty a man's work is not apt to have that energy and snap that is born of youth, and the tendency is first shown in his willingness to deputize details to others. I do not mean to say that a man begins to decline at fifty; on the contrary, he is at his prime. But he is better for judgment than he is for working out details. A man's real work, his energetic work, his laborious work, is generally done before he reaches the half-century period."

INEFFICIENT TEACHERS

(From the New York World)

There are about 20,000 teachers in the public schools of this city, and in ten years not a single teacher has been dropped for inefficiency. The mere statement of the facts is sufficient proof of the absurdity of the system under which the Board of Education has been operating and continues to operate.

In no business establishment would such a condition be possible. Every large business concern is bound in the course of time to accumulate a certain number of inefficient employees. But it reserves to itself the means of getting rid of incompetents, and from time to time in self-defense it must clean house.

To pretend that 20,000 teachers, men and women, young and old, all meet the requirements of efficiency that the best interests of the schools demand, and that there are no exceptions to be found anywhere, is plain humbug. It should be a question only of what standards and tests shall be applied by the Board of Education. Far from this being an indictment of the teachers as a class, it is only one means of protecting their title as a class to the highest respect.

EMPLOYERS FAVOR NEW SCHOOL IDEA

Boston Business Men Believe Supplementary Education Will Enable Youths to Work More and Better

The most radical innovation of the Boston School Department for several years will go into effect next September, when all pupils between the ages of 14 and 16 who obtained their employment certificates since last January will be forced to attend a continuation school at 25 LaGrange Street.

It is expected that between 5,000 and 6,000 workers will be affected by the order. These pupils must attend the school during a period of four hours a week, the hours to be arranged to meet the convenience of the employers as far as possible.

The introduction of this new system is the result of a bill passed by the Legislature in 1913 and confirmed by the local School Board at a meeting last December. Boston will be the first city in the State to try the new compulsory continuation school bill, and if it is successful it will probably be adopted by many cities throughout the State.

May Solve Problem

The bill was aimed to solve the problem of the pupil who left school without a definite intention of where he should direct his efforts with relation to his work in later life.

An investigation has been conducted by W. Stanwood Field, the director of evening and continuation schools, and by William J. Anderson, head of the department of commercial work at Dorchester High School, to determine the attitude of the employers towards the new bill.

The chief aim of the two school heads was to find out if the employers would be inclined to frown on the bill, as it would deprive them of four hours a week from each of the employees who would be affected by the new ruling.

The investigation brought to light the fact that instead of being unfavorable to the bill, the employers were almost unanimously in favor, and stated that they would not deprive the pupils of any wages because of the fact that they would be absent from work for four hours during the week.

Employers Willing

"I have visited 65 employers who employ from 3 to 120 boys and girls who are affected by the new ruling," said Mr.

Anderson, "and not one of them has said that he would make a deduction in the salary of any of the pupils. When I told them that there were 5,000 young people who were to receive an individual education, simple in character and suited to the individual desires, they all said that they would not stand in the way for one minute.

"The concern which employs 120 boys who will be affected by the order has already made arrangements so that 12 pupils will go to the school each morning and afternoon through the week.

"Most of the employers have told me that they expect to get as much work from the pupils in 44 hours as they would get in 48. Their reasons for this statement is that the gratitude of the workers who know that their employers are giving them four hours without any decrease in pay, will force them to do more and better work while they are in the shops, department stores, or wherever they happen to be employed.

"The school will also be used as a sort of clearing house, as we will try to make arrangements so that one boy who is employed in a department store and desires to be a machinist, may change his position with a boy who is employed in a machine shop, but wants to work in a department store."

Boys Favor Idea

It was learned that the attitude of the boys is very favorable towards the school as they may take up any line of vocational work that they desire.

The instruction in the trade departments will be under men who have earned their living by working at the trade which they teach.

The teachers will spend but a part of the time in instruction and the remainder will be devoted to visiting the home and place of employment of the individual pupil. There will be no more than 20 in a class, men teachers being provided for the boys and women for the girls.

It is expected that from 2,000 to 2,200 pupils will start September 9th in the five-story building at 25 LaGrange Street. The school will open at the same time as the regular schools, but will have a longer Christmas vacation to allow the pupils to devote their entire time to their employers' interests at a period when the business is rushed.

GENERAL EDUCATIONAL NOTES

Correspondence courses given by the University of California are popular among the inmates of the State penitentiary. Seven hundred prisoners of San Quentin's two thousand have enrolled for the various courses. One hundred and forty are attending the prison's day school and ninety the night school.

On Saturday, June 20th, the first class of eighty in snow removal were graduated from the street cleaning department school in New York City. Their class-rooms are in the stable in West Seventy-seventh Street. The eighty bright young men who recently completed their course in snow removal have been instructed by engineers from various departments who were lent for the purpose. The graduates became familiar with the construction of sewers, the velocity of their currents, the amount of snow which they might probably "get by with" in varying temperatures and all manner of such details. Although this is the month of roses the class went to various sections of the city and moved carts about and practised all the processes of snow removal. They will be foremen when winter comes and they will be prepared to handle the snow problem on new lines.

According to the latest figures given out at the eleventh annual convention of the Catholic Educational Association there are now about one million seven hundred thousand children being instructed in seventeen hundred parochial schools throughout the United States.

At a recent meeting held in New York City, at which time a plan for inaugurating a system for the proper development for industrial education for that city was under consideration, the principal speakers were: William Wirt, in charge of the Gary, Ind., Public Schools; H. E. Miles, President of the Wisconsin State Board of Education; Charles A. Prosser, National Commissioner on Vocational Education; Dr. Gustave Straubenmuller, Associate Superintendent of Schools of New York, and President Churchill, of the local Board of Education. Comptroller Prendergast, who was present, assured the Board of Education that whenever a comprehensive plan had been prepared through which the school children of New York City could be assured

of an education along industrial lines, the money would be furnished to finance same. In his address Dr. Wirt said: "One of the greatest tragedies in life is that when we can learn we won't, and when we are older and want to we can't. The system at Gary is aimed to solve this tragedy. Our aim is to create in the child a desire to learn those things which the school can teach him. He is in charge of his teachers from 8.30 to 4. Each classroom has two teachers. Each child costs \$40 a year, and higher salaries are paid than in New York. You can't let a child run on the streets for five or six hours each day until it is sixteen and then expect to do anything with it afterwards."

The establishment of a vocational school in the Woolworth Building, New York, is being planned by the Merchants' Association, with the co-operation of the Board of Education and of employers of more than one hundred boys and girls who work in the building and others in the vicinity. The opening of such a school has been recommended by the association's Committee on Vocational Education, the members of which are William Grant Brown, chairman; Edgar S. Barney, Samuel B. Donnelly, Linus Keating, Benjamin Traitel, and Rodman Wanamaker.

A simple, practical course in vocational study, which will enable girls just out of the grammar grades of the public schools to begin work at a salary of \$7 to \$8 a week, instead of \$3 or \$4, is planned for East Side New York. The Educational Alliance, at East Broadway and Jefferson Street, is fostering the scheme, the first real attempt at vocational instruction for girls made in this city, with the aid of the Board of Education.

The night school established in the Maryland penitentiary one year ago by Warden John F. Leonard typifies modern methods of handling prisoners in the State penitentiaries. The night school is intended for illiterates. It now has 112 students, and teachers, who are themselves inmates, move from one desk to another helping backward students, or they stand in the middle of a small circle of men all intensely interested in their recitation and striving like model schoolboys to master such

simple problems as children learn in the primary schools. The courses taught are simple and rudimental, very little above the kindergarten in many cases.

The Educational and County Committees of the Board of Trade of Newark, N. J., are considering a plan for agricultural instruction based upon a system in successful operation in Germany.

Professor Stephen S. Colvin, of Brown University, in discussing vocational guidance, said: "How many of us in choosing our life's work used any real choice? Was not our selection largely a matter of circumstance, if not of mere accident? Some of us have found the employment for which we were best suited, but the misfits have been many, and the mistakes in selection have often been serious both to the individual and to the community. Such mistakes are the cause of tremendous economic waste and of great individual unhappiness. To eliminate this waste, to reduce to a minimum this unhappiness, by aiding the individual to find precisely the occupation for which he is best suited, constitutes the present-day problem of vocational guidance."

Dr. Frank E. Spaulding, Superintendent-Elect of the Public Schools of Minneapolis, upon assuming his new duties made a strong point of the necessity of follow-up work with children who have left the public schools to take positions in industry. He said the public schools could give basic training for many trades in machine and pattern shops, and that through co-operation with employers the schools could aid in placing children where they were most likely to succeed.

The Goodyear Tire and Rubber Company has a system by which every prospective employee is submitted to a physical examination. The system was installed with an examination of employees on the company's factory payroll January 1st of this

year. The examination itself is not so formidable as it sounds, and the presence of various ailments revealed by examination does not necessarily bar candidates from employment by the company. On the other hand, the information thus obtained enables the placing of men where they will be most efficient and can work with minimum discomfort and maximum returns for themselves. Many men's positions were changed at the beginning of the year when examinations were begun, and those who were changed were benefited in every instance, according to the record. No one is absolutely barred by the examination unless found suffering from contagious or infectious disease.

Mrs. Anna H. Wiicox, Supervisor of Continuation classes in New York City schools, gave testimony before the United States Commission on Industrial Relations about the continuation classes which have been started in a number of department stores. She said at the present time continuation classes are held in Bloomingdales', Abraham & Straus's, Loeser's, A. D. Matthews', Altman's, and Hearn's stores in Manhattan and Brooklyn. The subjects of English, arithmetic, and geography were covered. "These classes are much appreciated by the employees," she said. "It is such a short time since they were organized that no definite results can be obtained yet, but the indications are very promising. Some of the pupils are so enthusiastic that, by co-operation of the management of the stores, they come half an hour before the opening time to get the full benefit of the lessons."

Night classes for vocational training were condemned by Superintendent Brumbaugh in the course of a talk on "Continuation Schools in Philadelphia." He told the Technical Education Conference of the Public Education Association that the night schools should be replaced by day classes for children employed in shops and factories. Leaders in industry, he added, were beginning to realize the value of trained workers, and ultimately would see the advisability of having their young employees spend part of each day in receiving instruction from specialists. He continued: "The wisdom of holding night classes for young persons who work eight hours a day well may be questioned. Knowledge gained by this method is purchased at too dear a price. And it is difficult to believe that young men can stand such a strain without serious impairment of their future value

in industry. I believe that the function of the evening school should be the Americanizing of foreigners who are yet unacquainted with our language and duties of citizenship."

Miss Linna Bresette, State factory inspector for Kansas, in an address given at Lawrence before the Civic Study Club, endorsed industrial education. Miss Bresette is the first woman factory inspector for Kansas. Her supervision extends over women workers, boys, and girls, to the number of 10,000 in all. Miss Bresette has been in the work a year. As a result of her experience she has come to the conclusion that the greatest needs of women laborers are industrial training and a State industrial welfare commission. There is the greatest need for trained and disciplined and intelligent workers. At least half of the responsibility for evil conditions and low wages is due to inefficient workers. A large per cent. of the women are ignorant, very few have passed the sixth grade, many have passed only the first two or three grades. Some are entirely without education. Most Kansas women workers are American born. The few foreign workers can scarcely write their names. The State should undertake the training and education of its workers.

The annual industrial exhibition of the Twin Falls, Conn., schools was held at the high school building and drew crowds of people that thronged the large auditorium in the afternoon and packed both the auditorium and the gymnasium in the evening to such an extent that many were forced to wait in the corridors for an opportunity to view the exhibits. The work shown by the students included sewing, cooking, manual training, and agriculture, also exercises by the physical culture students.

In speaking of an appropriation which has been requested from the Legislature of the State of Louisiana, the *Times-Democrat* says: "Under the Delgado bequest nearly \$1,000,000 is available for the building and equipment of one of the country's greatest industrial training schools. But under the terms of the will no part of the fund can be used for operation. If the city were in a financial condition to do so, it would gladly set aside the full annual quota for this expense; but, largely because it is now unequally treated in the division of the State's educational

resources, it finds itself unable to meet all its other obligations or to respond more generously to the demand which the school system makes upon its purse. What is asked of the Legislature is not a gratuity, but an act of justice from which the whole State will benefit. No one here questions the value of trade education.

Newark, N. J., will build a \$500,000 administration building which will be used exclusively for educational purposes.

Sixty big manufacturing, railroad and construction concerns are uniting with the University of Cincinnati, taking the students in two shifts, one alternating with the other, two weeks in the shop and then two weeks in the college. They are willing and anxious to take more. What is most important, more concerns are constantly being enlisted in the work. The College of Engineering of the University of Cincinnati is probably the least expensively equipped of any similar institution. It has a single type of each machine. It doesn't need more, because the students use the shops as their laboratories. They get the practice there. Only the theory is taught at the university. This plan can be extended to the high schools.

The Board of Education of New York City has asked for funds with which to build and equip over ninety new schools. Fifty-three of the new buildings will be for elementary schools and thirteen for trade schools. Most of the new buildings will have a seating capacity in excess of five hundred and several will reach a thousand.

The *Tribune* of Detroit, Mich., recently published a leading editorial in which was pointed out the value of early training: "We are a nation of unskilled. We are sending cotton to France, but we import artistic gowns from Paris. We export copper to Germany, but we import surgical instruments from that country. We sell our raw material cheap and pay high prices for the finished product. Why are we not turning our cotton and wool into beautiful gowns at home? Why are we not manufacturing our own surgical instruments? Why are American workmen, American manufacturers and dealers not getting the

enormous profits involved in the field of industry which lies between the raw material and the finished high-grade article?" One of the answers to these questions is that the artisan of the highest skill and efficiency must generally be caught young and put to the tasks he is expected to do when his hand and brain are acquiring the art of perfect co-ordination.

The *Evening Globe* of New York City recently published an editorial which was devoted to the welfare of the 20,000 children who graduated from the schools of that city. The great difficulty of the start in life is to avoid entering a "blind alley." The main consideration is not, or should not be, the immediate securing of a job with pay. The important point is that as many of the beginners as possible should start in work for which they are fitted and which offers some hope of permanency and improvement. The problem of placing them is that as many as possible may have from the outset a fair chance of success in life. It is odd that in all our educational and industrial planning so little attention has been given to this matter. Once out of school the boy or girl is generally left unaided or with only such aid as parents or friends with limited opportunities can give to find a place. Naturally the square pegs get into the round holes and vice versa with lamentable frequency, and scores of the brightest take, from temporary need or lack of view, positions in which they learn nothing and in which there is no future, so that about the age of twenty they find themselves adrift without equipment to reach any haven of security.

Among the speakers at the graduation of the students of North Industrial School, Pittsburgh, was John McLeod, First Vice-President of The National Association of Corporation Schools, and C. R. Dooley, a Director of our Association. It is gratifying to note the extent to which the members of our Association are being called into the education work in various cities. Nothing could be more encouraging or more helpful. Frank H. Ball, Director of Industrial Education in the Public Schools of Pittsburgh, was also one of the speakers. The list of graduates was a large one and included both young men and young women.

The City of New York is planning to establish an employment bureau for the specific purpose of placing boys and girls

who annually leave the public schools and go into industry. Miss Ella Ueland, of the Vocational Educational Survey, explained that the great difficulty in starting children to work is that they are not sufficiently trained for positions. She said the two upper grades in the public schools teach too much review in preparation for entrance to high school, leaving out of consideration the proper training of the vast majority of the children who must go to work. New Jersey educators declare similar bureaus are needed in their State. Over thirty thousand children under the age of sixteen have been working in the factories and mills throughout that State, but were thrown out of employment by the new labor law.

The *Baltimore American* estimates that there are three million children in the United States who possess some slight knowledge of reading, arithmetic and writing, but who are without any training whatever in any useful art or handicraft, and adds: "If this statement is accepted as being true, it is not necessary to argue further as to the missing link in our popular educational system. The teaching of reading, writing and arithmetic cannot be dispensed with, but an ability to interpret printed language or the knowing how to figure the cost of seven pounds of sugar at five and one-half cents per pound will not greatly aid the one possessing such knowledge in being of useful account in a strenuously practical world. Primary, secondary and even the higher academic education of the colleges is but a basis. Upon the basis there must be constructed the sort of education that fits for practical service, and no education should be regarded as finished that turns the child or young man out without some knowledge of an art, profession, trade or business by which to earn a livelihood. That is the theory of the vocation school propagandist."

AID FOR FARM COLLEGES

The first step in putting into effect the Smith-Lever co-operative agricultural extension law, approved by the President on May 8, which provides for the granting of Federal funds to the State agricultural colleges to aid in diffusing useful and practical information on subjects relating to agriculture and home economics, has been taken by the Secretary of Agriculture, who has written to the Governors of all States asking them to desig-

nate the college or colleges to which the funds provided by this act are to go.

The conditions of the act are that each State must duplicate the money above \$10,000 a year appropriated to it by the Federal Government. The money raised by the State may come from the State, county, college, local authority, or individual contributions from within the State, for the maintenance of co-operative agricultural work.

The act, after providing that pending the inauguration of the work the farm management and farmers' co-operative demonstration work shall not be discontinued, defines the uses to which the Federal moneys shall be put in this way:

"That co-operative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State Agricultural College or colleges receiving the benefits of this act."

FORTY GIRLS GRADUATE FROM NEW YORK CITY'S FIRST FACTORY SCHOOL

Under a banner bearing the arms of the City of New York, and underneath the line, "America is Another Word for Opportunity," forty young immigrant girls employed in the white goods muslin factory of D. E. Sicher & Co., No. 45 West Twenty-first Street, New York, received certificates of literary on June 4th.

The exercises were conducted by the Board of Education in the recreation room of the factory. It was the first time in the history of the public school of this State, if not of the United States, that foreign-born girls have taken part in such exercises and the public interest was shown by a large attendance of educators, among them Dr. John H. Finley, State Commissioner of Education; and Dr. William H. Maxwell, Superintendent of the city school system.

Learned English in a Year

Most of the forty girls came from Russia. They ranged in years from eighteen to twenty-three. Some of them have been

in the country less than two years, others above five. Until a year ago none of them could express her thoughts in English or even write her name legibly. After graduation they not only wrote their names legibly, but read brief essays, which, as a whole, made a history of the white goods industry from the cotton fields to the sales counter.

Most all of them spoke imperfectly, but not unintelligently. Their auditors understood every word, and what was equally important, they gave their auditors to understand that they knew what they were talking about. District Superintendent Jenkins presided. There was a regular graduation programme, and the girls wore regulation graduation frocks and looked as attractive as any graduating class in the elementary grades of the public school.

THE SCHOOL AND THE FACTORY

(From the Commercial Vehicle)

Broad co-operation between the university and commercial enterprise is the object of a new movement recently set on foot. The University of Pittsburgh, Pa., has founded the Mellon Institute of Industrial Research and School of Specific Industries. This institution will be devoted to all forms of research for industrial and commercial organizations on a contract basis.

This novel scheme offers the manufacturer the free and full advantages to be gained from the use of a completely equipped laboratory and library, in charge of picked experts in his particular line. It is arranged by the manufacturer buying, for a certain sum, a fellowship in the institute, in return for which the institute agrees to employ an expert to follow up a predetermined course of research on whatsoever subject the fellowship covers.

It offers advantages to the manufacturer that would be difficult and much more expensive to secure in a small way for himself. The fellows who are chosen to make the experiments and pursue the studies are retained on a salary and work for a bonus in case of success, enjoying the advantages of scholarship in the university in the meantime. The University of Pittsburgh has published a 15-page pamphlet on the subject, giving the prospectus of the institute, the text of the fellowship, and a list of thirty-two fellowships already made.